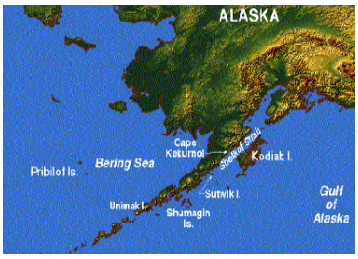


The Gulf of Alaska and the eastern Bering Sea is the location of the North Pacific Ocean

Understanding natural changes in the abundance of walleye pollock is important to fishery managers

Scientists deploying a bongo net to collect walleye pollock eggs and larvae.

Fisheries Oceanography

NOAA Request

NOAA requests an increase of $500,000 to develop a North Pacific Ocean monitoring system. This request is included in the Marine Environmental Research line of the Office of Oceanic and Atmospheric Research budget activity. This program is part of the America's Ocean Future Initiative.

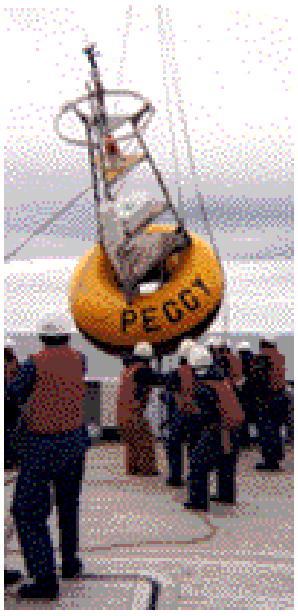
This system will provide key oceanographic indicators to allow NOAA managers to provide early warning of major environmentally-induced shifts in the productivity of key fisheries stocks. It will also enable NOAA researchers and managers to monitor current and water structure trends, atmospheric changes, fishery productivity, and ecosystem dynamics. This project is a partnership between OAR and NMFS. The research conducted by OAR will provide data on key oceanographic indicators and give greater insight into environmentally-induced shifts in the productivity of commercially important fish stocks. NMFS is requesting $2,500,000 in a coordinating program.

Background

The Fisheries-Oceanography Coordinated Investigations (FOCI) program was established by NOAA in 1984 to examine the physical and biological factors that affect the walleye pollock fishery in Alaska. Since the program was first implemented, FOCI scientists have identified substantial variations in the natural processes of the Gulf of Alaska and Bering Sea that affect the survival of young walleye pollock during their early life history stages before entering the fishery (recruitment). These variations include biological factors such as starvation and predation and physical factors such as climate, wind, and ocean current circulation.

Ongoing research programs have demonstrated that the effects of long-term ocean climate variability, variations in the Alaskan Stream(the primary current in the region), and prevailing winds, can affect the distribution, abundance, carrying capacity, and, ultimately, fisheries productivity of major ocean species of commercially valuable fish stocks in the North Pacific basin. The Pacific Decadal Oscillation has a negative and a positive phase which are linked to temperature and weather differences and is known to interact with El Nino and

other climate cycles. These differences influence the fish in this area causing population shifts in rhythm with local climate changes. When the instruments are available in the ocean where the fish live, scientists will be able to monitor known indicators and will be able to estimate future fish populations. Presently, there are no broad-scale systems in place in the North Pacific permanently directed toward monitoring these effects.



Scientists maintaining the moored platform, Peggy Bering Sea, located 90 nautical miles northwest of Dutch Harbor, Alaska, in 2200 m of water in the southeastern Bering Sea basin.

Proposed Actions

This initiative provides for the beginning of a near real-time monitoring network to supply ocean measurements for use in model verification and to initiate a long-term sampling program that will enable NOAA fisheries managers to build sustainable fisheries in the North Pacific Ocean.

Five bio-physical surface moorings and 14 subsurface moorings will be anchored in strategic locations throughout the North Pacific Ocean. These moorings are designed to collect data on the conditions in the oceans and atmosphere. When correlated with information on the North Pacific commercial fisheries, scientists will be able to advise managers of the impacts of long-term climate and oceanographic variability on commercially important fish stocks.

Moorings will be phased in over a four year period. Data collected from surface moorings will be made available in near real-time to researchers and fisheries managers via the World Wide Web. Moorings will be augmented by sub-surface drifting floats that measure temperature and salinity and provide flow trajectories in the North Pacific.

Benefits

OAR's contribution to fisheries research will enable managers to use climate, wind, and ocean current circulations as well as biological factors to establish sustainable harvest rates in ecosystems that experience large changes in long-term climatic conditions. Because ocean conditions affect the recruitment of larvae and young fish to the fishery, monitoring the oceans in the present yields insights on the state of the fishery in the future. This initiative will allow fishery managers to anticipate environmentally-induced changes in fishery yields and respond with appropriate management measures. It will provide direct economic benefit to both industry and the consumer.

For more information, please contact Andrew Larkin in NOAA's Office of Legislative Affairs at 202-482-4630.